

C L A I M S

1.- A method for reducing the surface roughness of a thin layer for thin-layer opto-electronic devices, the thin layer comprising at least one conductive oxide and
5 having a thickness of between 20 nm and 1000 nm, the method being characterized in that it comprises a polishing step of a mechanical type for polishing a surface of the thin layer using a polishing cloth and an abrasive compound, which includes particles having a
10 diameter of between 5 nm and 150 nm.

2.- The method according to Claim 1, in which said particles present substantially anti-aggregating properties.

3.- The method according to Claim 1 or Claim 2, in
15 which said particles are designed to exert an electrostatic repulsion on one another.

4.- The method according to any one of the preceding claims, in which said particles are silica particles and said compound has a basic pH, polishing being of a
20 mechanical and chemical type.

5.- The method according to any one of the preceding claims, in which said polishing cloth is a woven cloth.

6.- The method according to any one of the preceding claims, in which said cloth is made to rotate on said
25 surface at a speed of between 400 r.p.m. and 600 r.p.m. applying a pressure of between 0.3 kg/cm² and 0.8 kg/cm²

for between 10 seconds and 20 seconds.

7.- The method according to any one of the preceding claims, in which the polishing cloth is chosen in the group consisting of:

- 5 - semifinishing cloths,
- finishing cloths, and
- super-finishing cloths.

8.- A thin layer for opto-electronic devices, the layer comprising at least one conductive oxide and
10 being characterized in that it presents a difference in height between peak and trough of less than 28 nm and in that it has a thickness of between 20 nm and 1000 nm.

9.- The layer according to Claim 8, and presenting a
15 difference in height between peak and trough of less than 22 nm.

10.- The layer according to Claim 8, and presenting a difference in height between peak and trough of less than 15 nm.

20 11.- The layer according to Claim 8, and presenting a difference in height between peak and trough of less than 12 nm.

12.- The layer according to Claim 8, and presenting a difference in height between peak and trough of less
25 than 8 nm.

13.- The layer according to any one of Claims 8 to

12, and having a mean roughness of less than 1.7 nm.

14.- The layer according to any one of Claims 8 to 12, and having a mean roughness of less than 1.0 nm.

15.- The layer according to any one of Claims 8 to 5 14, and having a thickness of between 20 nm and 300 nm.

16.- A thin-layer opto-electronic device comprising at least one optically active intermediate layer (4, 5); and a thin layer (2), which comprises at least one conductive oxide and is set in contact of the optically 10 active intermediate layer (4, 5), the device being characterized in that the thin layer (2) is a thin layer according to any one of Claims 8 to 15.

17.- The device according to Claim 16, in which the optically active intermediate layer (4, 5) has a 15 thickness of between 1 nm and 300 nm.

18.- An organic electroluminescent device (OLED) comprising at least one cathode (3), at least one anode (2) and at least one optically active intermediate layer (4, 5) set between the anode and the cathode, 20 said optically active intermediate layer (4, 5) comprising at least one organic material, the device (1) being characterized in that said anode (2) includes a thin layer according to any one of Claims 8 to 15.

19.- The device according to Claim 18, in which the 25 optically active intermediate layer (4, 5) has a

thickness of between 1 nm and 300 nm.